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Minnesota Power is Utility of Year

BARRINGTON, IL—Minnesota Power has been named Electric Utility of the Year by *Electric Light & Power*. It is the 18th electric utility to be selected for the honor since inception of the national program in 1969.

The utility was selected on the strength of its performance in 1985, and to-date in 1986, on behalf of its customers, shareholders and employees, with respect for the quality of life and the environment within its service territory.

In announcing the selection of the Minnesota utility, *EL&P* Editor-in-Chief Robert A. Lincicome commended the utility for its efforts to offset major load losses resulting from severe economic pressures on its primary industrial customer base. These efforts, he said, led the company into an aggressive investment and diversification mode that has provided a new stimulus to the local ecomomy, created jobs, and strengthened the financial base of the utility.

"It has been a win-win-win effort, in which customers, employees and shareholders all have profited," he added.

A report describing the achievement of Minnesota Power begins on page 13

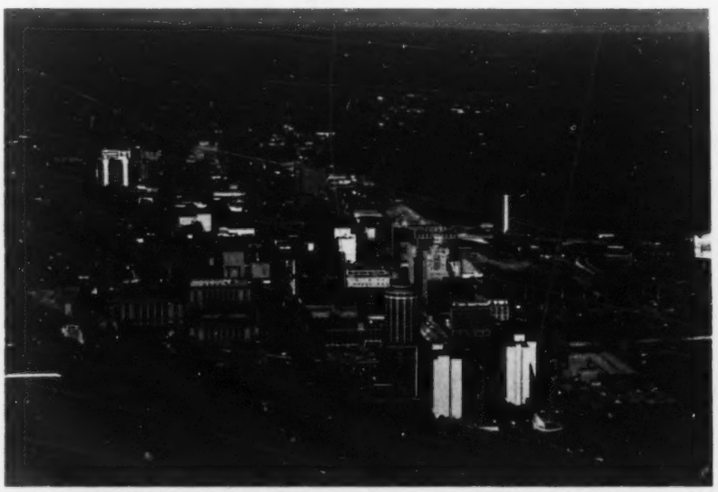
Minnesota Power serves customers in a 26,000 sq mile service territory making up approximately the northeastern one-third of the state. It is an area rich in forests, iron and other minerals.

The company is diversified and operates electric, telephone and/or water utility subsidiaries in Wisconsin, Arizona, Colorado, Florida, New Mexico and Oklahoma. It is a partner in Norlight, a utility-owned fiber-optic network designed to connect upper and lower midwest business centers. It is 50 percent partner in a large Duluth papermill, currently under construction, and holds a 43 percent interest in a major Florida land development company, plus equipment leases and other assets. It currently is evaluating several potential new diversification activities.

The company's diversification program resulted from management's efforts to offset the loss of load and revenues associated with the decline of taconite mining and steel industry activity. It is strongly dedicated to industrial and economic development to benefit its service territory.

In 1985, the company realized a 17 percent gain in net income, and 15 percent improvement in per-share earnings despite a 1 percent decline in revenues and an 11 percent reduction in kilowatthour sales. Its return on common equity improved to 16.7 percent from 15.4 percent in 1984.

Rates in 1985 were some 30 percent below the national average for investor-owned electric utilities and customers have not had a rate increase since 1981. The company currently is not engaged in any generation expansion programs. In fact, it is selling capacity to Northern States Power and will not need new capacity until the mid-1990s.



Duluth, MN is the headquarters city for Minnesota Power, Electric Utility of the Year for 1986.

Tax bill contains good news for customers, bad news for utilities

CHICAGO—What's good for the electric utility customer may not be good for the utility itself.

According to Duff & Phelps, Inc. analyst William A. Abrams, the new tax bill may benefit electric consumers and hurt the companies. He explained that customers will generally pay lower rates, while the financial credit quality of the industry will be weakened.

Writing in the Sept. 29 edition of *Credit Decisions*, a D&P publication, Abrams said, "Pre-tax earnings will decline, internal cash generation will be lower, and some companies, under the alternative tax provision, will pay tax on non-cash earnings previously excluded from taxation."

Major provisions

He said the major provisions of the bill relating to utilities are:

- the drop in the tax rate to 34 percent.
- the loss of the Investment Tax Credit (ITC).
- the stretch-out of tax depreciation lives.
- the 20 percent alternative tax provision.

For regulated industries, like electric companies, Abrams noted that Duff & Phelps expects political pressure for immediate rate reductions.

"As capital intensive companies," he wrote, "the electrics will have less cash due to the loss of the ITC and the stretch-out of tax depreciation lives."

Abrams explained that the difference between the 46 percent rate and the 34 percent rate will lower the accumulated deferred tax reserve. Utilities will then flow this differential back to customers over the life of the assets that created the reserves, thus reducing revenues and cash.

"But utilities with high non-cash earnings—such as AFC, accrued rev-

Continued on page 23

Future supply, demand outlook clouded, says NERC forecast

PRINCETON, NJ—Uncertainty clouds the future electric supply and demand picture, says the North American Electric Reliability Council (NERC) in its latest reliability review .

"While utilities have developed adequate electric supply plans, many of these plans are at risk," stated NERC in an executive summary of the report. "A leading concern of the Council is the uncertainty of the electric demand forecast which assumes demands will be reduced by load management, conservation and customer-owned generation.

"Of equal concern are the supply

Continued on page 23

1986-1995 FORECAST OF PEAK DEMAND AND ENERGY

	NERC U.S.	NERC Canada[a]	NERC Mexico[b]	NERC Total
Summer Peak Demand (Thousands of MW)				
1986	475	47	0.6	523
1995	577	61	1.2	639
Average Growth (%/yr)	2.2	3.0	7.1	2.3
Winter Peak Demand (Thousands of MW)				
1986/87	435	65	0.4	500
1995/96	533	83	0.8	618
Average Growth (%/yr)	2.3	2.8	7.1	2.4
Annual Energy (Millions of MWh)				
1986	2,525	350	3.0	2,878
1995	3,103	462	5.6	3,571
Average Growth (%/yr)	2.3	3.1	7.3	2.4

[a] Includes Nova Scotia [b] Northern portion of Baja California, Mexico only
Source: 1986 Reliability Review: NERC

Consumers Power and Dow Chemical to convert Midland

LANSING, MI—Consumers Power and Dow Chemical announced in September that they will work together to convert the idled Midland nuclear plant into a natural gas combined-cycle cogeneration plant.

Construction was halted in 1984 on the 85-percent complete, $4.1 billion plant. Consumers Power spokesperson Mike Koschik said approximately $560 million will be needed to convert the facility.

Under the agreement, Dow will become an equity participant in the project and would use steam and electricity from the plant at its Michigan Division Midland plant. The project will be owned by Dow, Consumers Power and other potential participants that were not identified. The utility spokesperson said that 2 or 3 participants and further details of the project should be finalized this month.

Koschik noted that the utility will contribute about $1 billion in existing plant equipment and has promised not to spend more than $50 million on the conversion.

Both companies also agreed to drop

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News Briefs

JILL MINNER, Assistant Editor

Feasibility study to be conducted on OPPD/NPPD merger

● According to Omaha Public Power District (OPPD), Norris Public Power District has requested that a study be conducted on the feasibility of a merger between the two utilities. "This study will analyze the impact of such a merger on OPPD and its customer-owners, which is our primary concern," said OPPD President Bernard W. Reznicek. "It will also look at the effect that a merger would have on state power supply needs and other financial and legal matters."

Virginia Power plans to install combined cycle unit

● Virginia Power has announced plans to install a coal gasification/combined cycle unit at its Chesterfield Power Station. Installation of the 205-MW unit is scheduled to begin in January 1988, according to the company. Completion of the second stage, a 65-MW steam cycle, is targeted for 1991. Virginia Power said a coal gasifier would be added in the 1990s if coal gas costs dropped below the cost of natural gas. The company also announced that it will not seek an increase in base rates in 1986 or 1987.

ANO becomes branch of Nat'l Academy for Nuclear Training

Arkansas Power & Light Co. said its Arkansas Nuclear One (ANO) plant was recently recognized as a branch of the National Academy for Nuclear Training. The academy focuses and unifies the training activities of the U.S. nuclear utility industry and serves as a vehicle for excellence in nuclear training. Pictured (from left to right) are: Jimmy D. Vandergrift, ANO training manager, Walter Coakley, director-accreditation division of the Institute of Nuclear Power Operations, Jim Levine, ANO site director, and Eric Johnson, director-reactor safety and projects division of the Nuclear Regulatory Commission.

NUS Corporation sells radwaste subsidiary

● NUS Corporation said it has sold its wholly-owned subsidiary, NUS Process Services Corp., to London Nuclear Services, Inc. The NUS subsidiary processes radioactive waste and, according to NUS Corp., will be merged with London Nuclear Services, Inc. to create LN Services, Inc.

Rockland Electric Co. requests rate reduction

● Rockland Electric Co. has asked the New Jersey Board of Public Utilities for an electric rate reduction of $6.6 million annually, according to the company. Under the proposed reduction, the company said a customer using 500 Kwh monthly would save $3.42 a month. Company President and Chief Operating Officer Thomas A. Griffin, Jr. stated that if the reduction is approved, Rockland's bills would be lower than they have been in seven years.

OECD nuclear generation grows by fastest rate since '77

● According to the Nuclear Energy Agency's (NEA) annual survey, as reported in a Canadian Nuclear Association newsletter, nuclear electricity production in the Organization for Economic Cooperation & Development (OECD) countries had a 19.2 percent growth rate in 1985, the largest rate of increase since 1977. The NEA's survey, *Summary of Nuclear Power and Fuel Cycle Data in OECD Member Countries 1986*, reported that all but one of the 13 OECD countries with nuclear programs increased their nuclear electricity generation in 1985. Five countries that had more than a 10 percent increase in nuclear generation were Belgium, the Federal Republic of Germany, Japan, Spain and Switzerland, according to the survey. The report also found that nuclear power is now the second largest contributor to electricity generation in OECD after coal, which contributes 42 percent.

EPA honors PSI with sulfer dioxide control award

● The Environmental Protection Agency (EPA) has presented its first annual "Award for Excellence in Sulfur Dioxide Control," to Public Service of Indiana (PSI), according to EPA. The award was given for PSI's exemplary operation of the sulfur dioxide control system at Unit 5 of its Gibson generating station. EPA said Unit 5 burns high-sulfur coal and is equipped with a limestone scrubber system that began operation in 1983. During 1985, EPA reports, the unit's FGD system had an average reliability of 99.8 percent.

NRC issues operating license to Illinois Power for Clinton

● Illinois Power Co. said it has been issued a facility operating license by the Nuclear Regulatory Commission, permitting the utility to load fuel and conduct low power testing at its Clinton power station. The license, according to Illinois Power, authorizes the utility to operate Clinton at up to five percent power. The company expects fuel loading to take approximately three weeks.

NRC given OK to authorize fuel license for Braidwood 1

● According to Commonwealth Edison Co., the Atomic Safety and Licensing Board has authorized the Nuclear Regulatory Commission (NRC) to issue a fuel load license to Edison's Braidwood Station Unit 1. Edison said the NRC will issue a license when it determines that the unit has fully met all fuel load requirements. The license would permit Edison to conduct pre-startup testing of Braidwood 1. At press time, Edison was awaiting approval by the Director of Nuclear Reactor Regulation and full licensing hearings were still being conducted.

British banks loan China $610 million to finance nuclear plant

● China has signed a $610 million loan with British banks to help finance the construction of its Guangdong nuclear power station and the purchase of two 985-MW turbine generators from General Electric Co. of Britain, according to *The Wall Street Journal*. The contract for the two generators, expected to start operation in 1992 and 1993, will be approximately $360 million. The Guangdong station is located in Daya Bay, 30 miles from Hong Kong, and about 70% of its production will be sold there, according to a memorandum of understanding signed by China and Britain earlier this year.

Westinghouse dedicates energy center

Westinghouse Electric Corp. recently dedicated its headquarters for electric power generation in Monroeville, PA. Technologies managed by the Westinghouse Energy Center include electric power from the atom, fossil fuels, the sun, water and low-premium fuels. The center also houses the world's largest private computer complex dedicated to science, according to Westinghouse.

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EL&P readers whose responsibilities include both Generation and Transmission/Distribution receive both technology sections. Other readers receive the technology section that applies to their respective area of responsibility. The Generation edition is indicated by a single dot (•) in the upper right corner of page 1, the T/D edition carries two dots (••). All readers receive EL&P's industry news section.

Editorial

Texas verdict poses liability threat to all electric utilities?

If a recent Texas Appellate Court decision stands, electric utilities in all parts of the country may find it more difficult—and expensive—to obtain liability insurance. Moreover, utilities will be branded as providing an essentially "dangerous" product, regardless of their efforts to ensure customer safety, and that can hurt in many ways.

The verdict in the case, *Houston Lighting and Power v. Reynolds*, upholds a lower court award of $3.7 million in compensatory and punitive damages to the family of a permanently injured teenage boy. The youngster had lost one arm and both legs as a result of connecting together eight 6-ft aluminum tent poles and using them to touch a 35-kV line running above the backyard of a friend. According to testimony, the youngster had told his friend that he couldn't be hurt by touching the line, since it was necessary to touch two lines to receive a shock.

The jury in the initial action held that the doctrine of strict liability applied and awarded the damages. And although the Court of Appeals heard and accepted evidence that the company had spent between $50,000 and $100,000 per year on educational activities, it upheld the lower court's jury decision that the company failed to adequately warn of the dangers of the 35-kV line. Electric industry trade associations are filing friend of the court briefs.

The threat to utilities everywhere, since such precedent travels fast, is that if the Texas decision stands, the question in cases involving electric shock will be how much, not whether, the utility should pay. Guilt will be presumed unless proof to the contrary can be provided.

There are a number of steps that utilities could take. But before utilities get together to go off in all different directions, it would seem that there is real need for the courts, legal groups, insurance companies and utilities to work out some sort of standard for what constitutes a sincere and acceptable warning and danger education program. Until such a standard is developed, and presumption of guilt and the deep pocket approach to compensation is eliminated, utility efforts to educate and/or warn of the dangers of electricity will be a shot at an invisible, moving target. Such efforts are as likely to miss as they are to hit the target.

Robert A. Lincicome, Editor-in-Chief

P.S.—In the interim, mightn't a regular program of Public Service messages on Saturday morning TV programs be an effective, and economical way to warn youngsters of the dangers of electricity?

Real 'preference' in hydro relicensing bill goes to utility that renders best service

There is bound to be continued argument over the elimination of the 'public preference' clause in the hydro relicensing bill signed into law by President Reagan on October 16. But it seems to us that the final version is in the best interest of all consumers, not those of any particular type of utility.

As hydro facility licenses come up for renewal, it will be the responsibility of the Federal Energy Regulatory Commission to grant the new license to the utility that submits the best plan for operating the facility, taking into account the potential impact on ratepayers if the license were transferred, proposals to upgrade recreational and environmental protection facilities and other public interest criteria. The issue of preference, which was a part of hydro-licensing procedures in the Federal Power Act of 1920 but was not specifically mentioned in that portion of the Act dealing with relicensing, has been the subject of controversy in the past. FERC and the courts have issued conflicting rulings. The new legislation ends that controversy.

What the new law really means is that those consumers that have been paying the cost of a hydro project will continue to enjoy the benefits of low-cost electric power from it. While we acknowledge that the legislation, titled the Electric Consumers Protection Act of 1986, appears to favor customers of investor-owned utilities, which operate most of the nation's hydroelectric facilities, it does work both ways. Where investor-owned utilities are licensed to operate the hydro facilities, public power utilities will enjoy no special advantage in relicensing procedures. Similarly, investor-owned utilities will have no advantage in the relicensing of hydro projects currently operated by Public Utility Districts or other publicly owned utilities.

Residential electric bills up 1%

WASHINGTON—Residential electricity bills rose about one percent in the past year, according to the results of a nationwide survey recently released by the National Association of Regulatory Utility Commissioners. In comparison, the Consumer Price Index increased about 3.9 percent.

Using a 500 kWh consumption level as the base, the report indicated that the nationwide average cost per kWh climbed from approximately 8.02 cents to 8.1 cents during the twelve month period from the previous survey. The survey also included monthly uses of 250 kWh, 750 kWh and monthly costs for typical usages for electric space heating.

The survey showed that residential customers are paying in excess of 11 cents/kWh in some 15 service territories, while in 22 others the rate is below 6 cents/kWh. The range was from a low of 3.6 cents/kWh in Lewiston, Idaho, to a high of 14.4 cents/kWh in New York City.

The survey was based on the rates of major investor-owned electric companies in effect for their largest service areas during December 1985 and January and February 1986. A total of 196 distinct service areas were surveyed in 49 states and the District of Columbia.

Analysis by region indicated that rates in the Northeast and Pacific Southwest regions were the highest, while rates of companies in the Northwest and Rocky Mountain areas were the lowest.

TEN MOST EXPENSIVE AREAS

Rank	City,State	Company	Bill	Avg. Cost
1	New York, NY	Consolidated Edison	$215.94	14.4¢
2	Kahului, HI	Maui Elec. Lt.	$205.08	13.7¢
3	Hilo, Hi	Hawaiian Elec.	$204.07	13.6¢
4	Long Beach, NY	Long Island Ltg	$195.91	13.1¢
5	New Bedford, MA	Commonwealth Elec.	$189.09	12.6¢
6	Middletown, NY	Orange & Rockland Util.	$189.07	12.6¢
7	San Diego, CA	San Diego G&E	$184.94	12.3¢
8	Poughkeepsie, NY	Central Hudson G&E	$181.62	12.1¢
9	Philadelphia, PA	Philadelphia Elec.	$179.25	12.0¢
10	Bridgeport, CT	United Illuminating	$176.59	11.8¢

TEN LEAST EXPENSIVE AREAS

196	Lewiston, ID	Washington Water Pwr.	$54.30	3.6¢
195	Spokane, WA	Washington, Water Pwr.	$55.50	3.7¢
194	Ontario, OR	Idaho Pwr.	$57.78	3.9¢
193	Kalispell, MT	Pacific Power & Lt.	$62.01	4.1¢
192	Boise, ID	Idaho Pwr.	$62.70	4.2¢
191	Yakima, WA	Pacific Power & Lt	$64.14	4.3¢
190	LaGrande, OR	CP National	$66.36	4.4¢
189	Portland, OR	Portland General Elec.	$72.84	4.9¢
188	Bellevue, WA	Puget Sound P&L	$76.84	5.1¢
187	Newport, VT	Citizens Utilities	$78.21	5.2¢

EL&P publisher sold to Cahners

NEW YORK—Technical Publishing Company, publisher of *Electric Light & Power* and 20 other business publications, has been purchased by Cahners Publishing Co., former owner of *EL&P*.

The purchase was announced in September by The Dun & Bradstreet Corporation, parent of Technical Publishing Company. The purchase price was $250-million.

The agreement was finalized Oct. 31. Cahners, which publishes 34 trade magazines, is a subsidiary of Reed International of London. The sale included 20 of Technical's magazines. *Dun's Business Month* was not included in the sale.

Technical bought *Electric Light & Power* in 1977 from Cahners, which had published it since 1962.

Reed International had sales of $3 billion in the fiscal year which ended on March 31, 1986. Reed's other businesses in the U.S. include Reed Exhibitions, an organizer of trade shows, and R.R. Bowker, a supplier of information for book trade in the U.S.

Other publications

In the U.K., Reed publishes a wide range of consumer and business magazines, newspapers and owns one of the country's leading English law publishers. The company also publishes English language magazines and newspapers outside the UK and North America and has broad international interests in paper, packaging and paint.

Cahners is headquartered in Newton, MA.

Electric Light & Power

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NERC supply, demand forecast . . . from page 1

plans which rely heavily on additional non-utility generation, life-extension programs for aging generating units, and the purchase of large amounts of capacity from other utilities," NERC said.

Demand growths

Annual demand growths of 2.2 percent in the U.S. can be supported by the current supply plans of utilities. NERC estimates an 80 percent probability that annual demand growths will range from -0.2 percent to 4.4 percent.

The report urges the utility industry to make commitments now to new coal-fired capacity that will be needed in the next decade. NERC says that over 13 percent of the total capacity additions needed in the next 10 years are coal plants not yet under construction.

According to the report, non-utility generation makes up 11 percent of the planned capacity additions in the U.S.

Life extension and maintenance programs have helped utilities maintain the reliability of their older generation. NERC predicts that the average age of U.S. generating units will increase to 26 years by 1995, compared to 17 years in 1985 and 11 years in 1975.

Loaded to limits

Many transmission lines will be loaded to their reliability limits for extended time periods, said the review. "However," pointed out NERC, "utilities are finding it increasingly difficult to expand their transmission systems to meet these increased needs due to uncertainty about future benefits, lengthy licensing processes, and conflicting jurisdictions."

Purchases and sales of energy between utilities accounted for 20 percent of the energy delivered to customers last year, found the council. It said that increasing the purchases significantly in the future will be precluded unless transmission construction impediments can be overcome.

System will be stressed

NERC said the North American electric system "will be stressed in the years ahead as utilities adjust to non-utility generation, fluctuating energy prices, increasing competition, and less control of their plans and operations. To meet these challenges, utilities will need to keep existing units in operation, keep construction on schedule, work with regulators to shorten lead times for new facilities and strive for effective load management and conservation programs."

Midland conversion . . . from page 1

their current legal proceedings that began when Dow backed out of its steam agreements with the utility after the Midland plant was put on hold. The combined lawsuits represent over $500 million.

Dow and Consumers Power are expected to ask the Michigan Public Service Commission to expedite the removal of current restrictions on spending funds to convert the plant.

In a joint statement, Dow vice president and general manager of the Michigan Division F. R. Lehman and Consumers Chairman and CEO William T. McCormick, Jr., said, "We believe that this cooperative agreement will greatly benefit both companies and is in the best interests of the State of Michigan...Working together, we can end the controversy and put the proposed Midland cogeneration plant to work for Michigan."

Constructed in two phases

The utility said the plant would be constructed in two phases. The first 875 MW unit is scheduled for completion in 1989, and the second 425 MW unit will be finished a few years later.

Twelve combined-cycle gas turbines would be hooked up to the plant's existing equipment. Koschik said the utility hopes to begin design and engineering work on the plant by the end of the year.

He pointed out that Consumers Power is very supportive of cogeneration. The company recently formed a subsidiary called CMS Cogeneration to help foster cogeneration growth in its service area. Although not much currently exists, Koschik said the utility expects that over the next 15 years cogeneration will account for five percent of its total output.

Reaction in the Midland area to the conversion concept has been "very positive," said Koschik.

A similar conversion idea was initially proposed in April 1985 involving Consumers Power only.

Tax bill contains good, bad news . . . from page 1

enues, or deferred expenses—may be faced with higher taxes," he warned. "The 20 percent alternative tax will impose a cash tax expense on heretofore untaxed annual earnings."

Abrams predicts that internal cash will be lower for most companies. With no change in construction spending plans, he said a company that has been expecting 100 percent internal cash might have only 80 to 90 percent.

"Companies that had forecast enough internal funds over five years to meet all construction and refunding needs —or non-utility diversification—now expect to return to the capital markets just to cover construction and refundings," he wrote.

For utilities subject to the alternative tax, Abrams said the company's operating expense for income taxes may be higher than the amount currently included in rates. That means the utility will have to pay the tax instead of deferring it, thus increasing financial needs and raising capital costs.

Abrams said in the newsletter that companies with tax loss carryforwards will use them up more quickly. Also, he thinks the new tax bill may discourage investment in PURPA machines, qualifying facilities, and cogeneration.

"In summary, the tax bill reduces quantitative protection measures, thereby increasing financial risk for the electric utilities," stated Abrams. "For some companies, business risks may also grow."

AIF publishes booklet on low-level radwaste

BETHESDA, MD—The Atomic Industrial Forum, Inc. has just published a booklet, *Low-Level Radioactive Waste: Building a Perspective.*

The booklet examines the main sources of low-level radioactive waste, how to reduce its volume, ship, package and bury it, and more.

For information on the booklet contact Don Winston, Scott Peters or Ellen Werther at (301) 654-9260 or Eugene Gantzhorn at (212) 599-1881.

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Manufacturing will take place at the Kuhlman Power Transformer Division factory in Crystal Springs, Mississippi, while the headquarters will be located in Dearborn, Michigan.

For more details, contact:
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or call: (313) 277-2250

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